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**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK**

IN RE FOREIGN EXCHANGE
BENCHMARK RATES ANTITRUST
LITIGATION

New York, New York
No. 13-cv-7789-LGS January 17, 2017

This document relates to:
All Actions

SO ORDERED


HON. LORNA G. SCHOFIELD
UNITED STATES DISTRICT JUDGE

**STIPULATION AND ~~PROPOSED~~ ORDER ESTABLISHING THE PROTOCOL
FOR THE PRODUCTION OF DOCUMENTS AND ELECTRONICALLY
STORED INFORMATION (“ESI”)**

Pursuant to the agreement reached between Plaintiffs and Defendants herein, this Court adopts and orders the following Protocol relating to the Production of Documents and Electronically Stored Information in these Proceedings, which binds all parties and their counsel of record in this Action, whether they currently are involved or become so in the future (collectively, the “Parties”). The failure of this Protocol to address any particular issue is without prejudice to any position that a Party may take on that issue.

I. DEFINITIONS

- a. “Action” means the above-captioned matter, and any and all cases consolidated or coordinated with it.
- b. “Document” and “Electronically Stored Information” (“ESI”) shall have the same meaning as the usage of these terms in Civil Rule 26.3(c)(2) of the Local District Rules and Federal Rule of Civil Procedure 34(a)(1)(A).

c. “Email” means an electronic means for sending, receiving, and managing communications via different structured data applications (email client software), including, but not limited to, Microsoft Outlook, Google Gmail, Yahoo Mail, or Lotus Notes, and the file created or received by such means, though the inclusion of any platform, program, client, or software as an example herein will not obligate any Party to collect such ESI.

d. “Instant Messages” means communications involving immediate correspondence between two or more users sent via chat client or SMS, including but not limited to, Bloomberg Chat, Google Talk, WhatsApp, Yahoo! Messenger, AOL Instant Messenger, Blackberry Messenger, ICQ, Pidgin, Line, Audium, Trillian, or any proprietary instant messaging system, though the inclusion of any platform, program, client, or software as an example herein will not obligate any Party to preserve or collect such ESI.

e. “Native Format” means and refers to the file structure of a document created by the original creating application (in contrast to a Static Image, which is a representation of ESI produced by converting a native file into a standard image format capable of being viewed and printed on standard computer systems, such as .tiff or .pdf).

f. “Metadata” means (i) information associated with or about a file that is not ordinarily viewable or printable from the application that generated, edited, or modified such native file which describes the characteristics, origins, or usage or validity of the electronic file; and (ii) information generated automatically by the operation of a computer

or other information technology system when a native file is created, modified, transmitted, deleted, saved, or otherwise manipulated by a user of such system.

g. “Load File” means an electronic file containing information identifying a set of paper-scanned images or processed ESI and indicating where individual pages or files belong together as documents, including attachments, and where each document begins and ends. A Load File will also contain data relevant to the individual Documents, including extracted and user-created Metadata, as well as OCR or Extracted Text, should such data be available.

h. “OCR” means optical character recognition technology which is created by software used in conjunction with a scanner that is capable of reading text-based paper/hard copy documents and making such documents searchable using appropriate software.

i. “Extracted Text” means the text extracted from a native document, and includes all header, footer, and document body information, including any hidden content, when available. A “Text File” is a file containing the full multi-page text of native or near-native files extracted directly from the native file, or, in the case of paper/hard copy documents subject to OCR, a file containing the text resulting from the OCR.

j. “Media” means an object or device, including but not limited to, a disc, tape, computer, or other device, on which data is or was stored.

k. “Parties” collectively shall mean all named parties to any action in these Proceedings, including any Party added or joined to any complaint in these Proceedings, as

well as named parties to actions that may be consolidated into or coordinated with the above-captioned Action.

l. "Production" or "Produced" includes any exchange of Documents or Electronically Stored Information between the Parties, whether voluntarily or in response to a formal or informal request.

m. "Search Term" means a combination of words (including synonyms) and phrases designed to capture potentially relevant ESI, and includes strings of words and phrases joined by proximity and Boolean connectors.

n. "Static Image" means or refers to a representation of ESI produced by converting a native file into a standard image format capable of being viewed and printed on standard computer systems. A Tagged Image File Format (TIFF) image is an example of a Static Image.

o. "Structured Data" means ESI stored in a structured format, such as databases or data sets according to specific form and content rules as defined by each field of the database.

p. "Predictive Coding/Technology Assisted Review" shall mean processes for prioritizing or coding a collection of documents using computerized systems, such as machine-learning algorithms, that may rely on the judgments of one or more attorneys experienced in the subject matter of a litigation regarding the responsiveness of a subset of documents and extrapolates those judgments to the remaining document collection. For purposes of this Protocol, Predictive Coding/Technology Assisted Review is synonymous with computer-assisted review, computer-aided review, and content-based advanced

analytics or other terms used to refer to search methodologies that rely on machine-based learning to identify responsive documents.

q. “Unstructured Data” refers to free-form data which either does not have a data structure or has a data structure not easily readable by a computer without the use of a specific program designed to interpret the data, such as word processing documents, slide presentations, Email, and image files.

II. SCOPE

a. **General.** The procedures and protocols outlined herein govern the Production of Documents and ESI by all Parties. The Parties will take reasonable steps to comply with this agreed-upon protocol for the Production of Documents and Electronically Stored Information (“Protocol”). All Productions made pursuant to this Protocol are subject to the Order of Confidentiality entered by the Court on January 25, 2016 (ECF No. 555) (“Confidentiality Order”), and any further protective orders or privilege orders entered in these Proceedings. Nothing in this Protocol is intended to be an exhaustive list of discovery obligations or rights of a Party requested to produce Documents or ESI (“Producing Party”) or a Party requesting Documents or ESI (“Requesting Party”).

The production specifications in this Order apply to Documents that are produced in the first instance in this Action. To the extent any Party is required to or agrees to produce Documents in this Action that originally were collected or produced in other cases or government investigations, such Documents may be produced in the same format in which they originally were produced in the other cases or to the government. The terms and specifications of this Order shall only apply to productions made after the date of entry

of this Order. Productions in this Action that were delivered before the date of entry of this Order are exempt from the terms of the Order, unless the Producing Party and Receiving Party otherwise agree.

To the extent additional obligations or rights not addressed in this Protocol arise under the Federal Rules of Civil Procedure, local rules, or applicable state and federal statutes, they shall be controlling.

b. Limitations and Non-Waiver. The Parties and their attorneys intend by this Protocol to make the mutual disclosures promised herein. The Parties and their attorneys do not intend by this Protocol to waive their rights to any protection or privilege, including the attorney-client privilege and the work-product doctrine. All Parties preserve their attorney-client privileges, work product protection, and other privileges. The Parties and their attorneys are not waiving, and specifically reserve, the right to object to any discovery request on any grounds. Further, nothing in this Protocol shall be construed to affect the admissibility of Documents and ESI. All objections to the discoverability or admissibility of any Documents and ESI are preserved and may be asserted at any time.

c. Reservation of Rights. For the avoidance of doubt, the inclusion of any platform, program, application, or software in Section I as examples does not create any independent obligation or commitment to preserve or collect ESI from such platform, program, application, or software. The Parties reserve all rights to object to any demand to collect or produce ESI from any or all of the examples listed in Section I.

d. Modification by Agreement. Any practice or procedure set forth herein may be varied by agreement of affected Parties, which will be confirmed in writing, where

such variance is deemed appropriate to facilitate the timely and economical exchange of Documents and ESI. Any Party added or joined to any complaint in this Action and any Party to actions that may be consolidated into or coordinated with the above-captioned matter after the date of this Protocol that seeks to deviate from Protocol set forth herein must obtain leave of Court to do so unless all affected Parties otherwise consent in writing. Before seeking Court intervention, Plaintiffs and all affected Defendants shall meet and confer in good faith regarding any modification.

e. **Modification by Court Order.** Nothing in this Protocol waives the right of any Party to petition the Court for an Order modifying its terms upon good cause shown, provided, however, that counsel for such party must first meet and confer with the counsel for the opposing party and the Parties shall use reasonable best efforts to negotiate an exception from or modification to this Agreement and Order prior to seeking relief from the Court.

III. PRESERVATION

The Parties agree that they shall continue to take reasonable steps to preserve relevant Documents and Electronically Stored Information that may exist for a Document or ESI, in accordance with their obligations under applicable law. The Parties will meet and confer regarding the scope of preservation, including custodians, data sources, date ranges, and categories of information that have been or should be preserved in connection with this litigation and disclosures regarding custodians, data sources, date ranges, and categories of information necessary to facilitate the Parties' negotiations. By preserving or

producing information for the purpose of this Action, the Parties are not conceding that such material is discoverable.

IV. PRODUCTION OF STRUCTURED DATA

Where a discovery request requires production of Structured Data, in lieu of producing structured data systems or applications, the Parties shall meet and confer on the content and format of a data extraction from such structured data source. The Parties shall discuss and attempt to agree upon the sets of data or fields to be included in the extraction and the format in which data extracted from the data source shall be produced and the Producing Party shall make all disclosures necessary for the Requesting Party to understand and evaluate whether the content and format of a proposed data extraction would satisfy a production request, such as the data fields available, the meaning of data fields, as well as codes and abbreviations used in the data source and whether a data dictionary exists, the time period over which data exists, any database scheme, or other relevant information. The Producing Party shall generate a sample report of such extracted data for review by the Requesting Party or counsel upon agreement of the Parties as to the fields to be produced and the format of production. The Parties reserve all rights to object, including but not limited to, objections for relevance, undue burden, and/ or inaccessibility.

V. IDENTIFICATION OF RESPONSIVE DOCUMENTS.

The Parties shall meet and confer in good faith to come to an agreement on search methods used to identify responsive Documents and ESI. The Parties will meet and confer regarding the methods to be used to search Documents and ESI for potentially responsive documents or filter out Documents and ESI that are not subject to discovery, and such meet

and confers will include disclosures necessary for the Requesting Party to understand and assess the sufficiency of the proposed search or filtering methodology, such as the nature of and processes of the search technology employed, the custodians and data sources and types to which it will and will not be applied, date ranges that may be used to filter documents, file types subject to or excluded from the methodology, search terms proposed to be used (if any), statistical sampling or validation techniques the Producing Party has used or intends to use to evaluate the sufficiency of the methodology, and whether different search methodologies will be applied to different types or sources of data. During such discussions, the Producing Party shall retain the presumptive right and responsibility to manage and control searches of its data files, including the right to propose revisions to search-term methods or advanced-technology procedures in order to make them more accurate and cost-effective and will disclose those proposed search methods and any revisions. Nothing in this section shall limit a Party's right to reasonably seek agreement from the other Parties or a Court ruling to modify previously agreed-upon search terms or other search parameters at any time prior to the completion of discovery. The Parties will not seek Court intervention without first attempting to resolve any disagreements in good faith, based upon all reasonably available information.

a. **Search Terms:**

1. Where the Parties agree that potentially responsive ESI shall be searched through the use of search terms, the Parties shall meet and confer to provide reasonable assurances to the Requesting Party that the Producing Party's search terms and methodology used to apply them are reasonably calculated to identify

responsive Documents and ESI. Prior to or during such meet and confer, the Producing Party shall make the disclosures identified above.

2. If, after disclosure of the Producing Party's proposed search method, search parameters, and search terms, and prior to the conduct of any searches, and after a reasonable meet and confer process, a Requesting Party believes in good faith that the Producing Party's proposals regarding search, retrieval, and production would result in deficiencies in production, the Requesting Party may make prompt requests for different or additional search methods, parameters, or search terms, but such requests shall only be made after the Parties have met and conferred as to the alleged deficiencies identified by the Requesting Party. If the Parties cannot resolve their disagreements regarding search term methodologies they shall promptly bring the dispute to the Court for resolution.

b. **Technology-Assisted-Review:** No Party shall use predictive coding/technology-assisted review for the purpose of culling the documents to be reviewed or produced without notifying the opposing Party prior to use and with ample time to meet and confer in good faith regarding a mutually agreeable protocol for the use of such technologies, if any. If the Parties cannot resolve their disagreements regarding technology assisted review methodologies, they shall promptly bring the dispute to the Court for resolution.

The fact that a Document or ESI is responsive to a search term or identified as responsive by any other technology used to identify potentially responsive Documents and ESI shall not prevent any Party from withholding such file from production on the

grounds that the file is not responsive or that it is protected from disclosure by applicable privilege or work-product protection.

VI. PRODUCTION OF DOCUMENTS ORIGINATING AS PAPER

The following production specifications apply to Documents that existed in paper format prior to production (“hard copy documents”). Documents that originated as paper but which were scanned and maintained electronically by a Party prior to inception of this Action shall be produced in accordance with Part VII of this Protocol. The Parties agree to produce hard copy documents in the formats described below, to the extent reasonably practicable and not unduly burdensome. These formats are deemed to be productions in reasonably usable form. If a Producing Party intends to produce any hard copy documents in any manner other than as specified herein, the Producing Party shall notify the Requesting Party of its intent, including production format (*e.g.*, produced as paper, made available for inspection). If the proposed production format is not acceptable to the Requesting Party, the Parties shall meet and confer to determine a mutually acceptable production format for such Documents.

a. **TIFFs.** Documents should be produced as single-page, black and white, group IV TIFFs imaged at 300 dpi. Bates numbers, confidentiality designations (in accordance with the protective order governing the case), and redactions (to the extent they are necessary) should be burned into the image. TIFF image files should be provided in an “Images” folder.

b. **Unitizing Documents.** In scanning paper documents, distinct documents should not be merged into a single record, and single documents should not be split into

multiple records (*i.e.*, paper documents should be logically unitized). For example, documents stored in a binder, folder, or similar container (each a “container”) should be produced in the same order as they appear in the container. The front cover of the container should be produced immediately before the first document in the container. The back cover of the container should be produced immediately after the last document in the container. The Parties will undertake reasonable efforts to, or have their vendors, logically unitize documents correctly, and will commit to address situations of improperly unitized documents.

c. **Parent-Child Relationships.** The Parties agree that if any part of a Document or its attachments is responsive, the entire Document and attachments will be produced, except any attachments that must be withheld or redacted on the basis of privilege or work-product protection. The Parties shall take reasonable steps to ensure that parent-child relationships within a document family (the association between an attachment and its parent document) are preserved. The child-document(s) should be consecutively produced immediately after the parent-document. Each document shall be produced with the production number for the first and last page of that document in the “BegBates” and “EndBates” fields of the data load file and with the “BegAttach” and “EndAttach” fields listing the production number for the first and last page in the document family.

d. **OCR.** To the extent that documents that exist in paper or hard copy format have been run through optical character recognition (“OCR”) software, the full text shall be provided on a document-level in an appropriately formatted text file (.txt) that is named

to match the first Bates number of the document. Text files should be provided in a “Text” folder. To the extent that a document is redacted, the text files should not contain the text of the redacted portions.

e. **Unique IDs.** Each TIFF image should have a unique filename, which corresponds to the Bates number of that page. The filename should not contain any blank spaces and should be zero-padded (*e.g.*, ABC-000001), taking into consideration the estimated number of pages to be produced. If a Bates number or set of Bates numbers is skipped in a production, the Producing Party will so note in a cover letter or production log accompanying the production. Bates numbers will be unique across the entire production and prefixes will be consistent across all documents a party produces in the Action.

f. **Data Load Files.** Documents should be provided with an Opticon Cross-Reference File and Concordance data load file using standard Concordance delimiters:

- i. Field Separator: ASCII character 20 (“¶”);
- ii. Quote: ASCII character 254 (“þ”); and
- iii. New Line: ASCII character 174 (“®”).

Concordance-compatible image and data load files should be provided in a “Data” folder.

g. **Metadata.** Each of the Metadata and coding fields set forth in Appendix A shall be produced for that Document.

h. **Color.** Documents containing color need not be produced in color in the first instance, provided however, that the Producing Party shall retain a copy of produced hard copy documents in color. However, if good cause exists for the Requesting Party to request production of certain documents in color, the Requesting Party may request

production of such documents in color by providing (1) a list of the Bates numbers of documents it requests to be produced in color format; and (2) an explanation of the need for production in color format. The Producing Party shall not unreasonably deny such requests.

VII. PRODUCTION FORMAT FOR UNSTRUCTURED ELECTRONICALLY STORED INFORMATION

The Parties agree to produce in the formats described below. These formats are deemed to be productions in reasonably usable form. If any Party contends that particular Documents or ESI warrant a different format, the Parties will meet and confer to determine a mutually acceptable production format for such Documents.

a. **TIFFs.** Documents should be produced as single-page, black and white, group IV TIFFs imaged at 300 dpi. The document's original orientation should be maintained (*i.e.*, portrait-to-portrait and landscape-to-landscape). Bates numbers, confidentiality designations (in accordance with the protective order governing the case), and redactions (to the extent they are necessary) should be burned into the image. TIFF image files should be provided in an "Images" folder.

b. **Extracted Text Files.** The full text of native files should be extracted directly from the native file (not OCR) and should be delivered in an appropriately formatted text file (.txt) that is named to match the first Bates number of the document. Text files should be provided in a "Text" folder. To the extent that a document is redacted, the document should undergo OCR after the text has been redacted in order to remove the redacted text.

c. **Chat Data.** For ESI that is chat data, ESI should be provided in the original Native Bloomberg TXT Format typically packaged within a .tgz container file, or, if the chat data that existed at the time this Action was filed was not maintained in that format at

the time of filing, or was previously produced in connection with a Regulatory Production and the chat data was not preserved in Native Bloomberg TXT format, the Parties shall produce chat data with the following metadata fields to the extent they exist:

1. RoomID /PCHAT Number / INTMSGID;
2. Conversation start;
3. Conversation end time;
4. Duration of chat;
5. Participant Count / Number of Participants.

Further, the directory structure for chat data must contain the following:

1. + arbitraryparentname;
2. + TXT;
3. + mmddyy-mmddyy1;
4. + prefix.IB.mmddyy-mmddyy.txt2;
5. + prefix.IB.mmddyy-mmddyy.txt.att.tar.gz.

d. **Unique IDs.** Each image should have a unique filename, which corresponds to the Bates number of that page. The filename should not contain any blank spaces and should be zero-padded (*e.g.*, ABC-000001), taking into consideration the estimated number of pages to be produced. If a Bates number or set of Bates numbers is skipped in a production, the Producing Party will so note in a cover letter or production log accompanying the production. Bates numbers will be unique across the entire production and prefixes will be consistent across all documents a party produces in this Action.

e. **Parent-Child Relationships.** The Parties agree that if any part of an Email or its attachments is responsive, the entire Email and attachments will be produced, except any attachments that must be withheld or redacted on the basis of privilege or work-product protection. The relationship between attachments, enclosures, embedded files, and/or exhibits to any parent document shall be preserved. The child-document should be consecutively produced immediately after the parent-document. Each document shall be produced with the production number for the first and last page of that document in the “BegBates” and “EndBates” fields of the data load file and with the “BegAttach” and “EndAttach” fields listing the production number for the first and last page in the document family.

f. **Metadata.** The Parties agree that Metadata will be produced for all ESI, whether produced in Native Format or Static Image formats. Appendix A sets forth the minimum metadata fields that must be produced to the extent that metadata exists for a particular document. To the extent that metadata does not exist, is not reasonably accessible or available, or would be unduly burdensome to collect, nothing in this ESI Protocol shall require any Party to extract, capture, collect, or produce such data except for those fields marked for Hard Copy Documents in Appendix A, provided, however, that where such metadata is not produced on such grounds, the Producing Party shall disclose which fields it will not produce. If Metadata is redacted or withheld, the Producing Party will so inform the Requesting Party and record the redaction on any privilege log prepared by the Producing Party; redacted Metadata shall be preserved.

g. **Production of Documents in Native Format.**

1. The processed native for all spreadsheets (*i.e.*, MS Excel, .CSV, or similar), and electronic information containing audio or video components should be produced and linked to the database by the metadata field “NativeLink.”
2. Presentation files will be processed to TIFF format showing comments, hidden slides, speakers’ notes, and similar data. In addition to TIFF images, native files will be provided for presentation files. The native file will be named as the first Bates number of the respective document. The corresponding Load File shall include native file link information for each native file that is produced.
3. The Requesting Party may ask for certain other documents and/or databases initially produced in TIFF format to be produced in their Native Format in the event that the TIFF format is not reasonably usable. The Requesting Party shall identify the documents by their Bates numbers and the documents should be produced in their unaltered Native Format.
4. Where native files are produced in lieu of TIFF images, each native file will be assigned a unique Bates number. The Producing Party will produce a placeholder (a single-page TIFF slip sheet indicating that the native item was produced) along with the file itself in Native Format. The placeholder will be branded with the production number in the lower right hand corner and the phrase “PRODUCED IN NATIVE ONLY” branded in

the center of the page. The Producing Party will also brand any confidentiality or similar endorsements in the lower left hand corner of the placeholder.

5. To the extent that a native spreadsheet must be redacted, the Producing Party may redact either the native file or produce TIFF images with burned in redactions in lieu of a Native File and TIFF placeholder image. If redacting TIFF images and to the extent that any of the following can be automated, the Producing Party, or its ediscovery vendor, should make reasonable efforts to: (1) reveal hidden rows, columns, or sheets prior to converting the document to TIFF; (2) clear any filters that may conceal information; (3) adjust column widths so that numbers do not appear as “#####”; (4) ensure that column and row headings print; (5) ensure that the tab name appears in the header or footer of the document; (6) process comments so that they are produced at the end of the spreadsheet; and (7) process spreadsheets so that they print across, then down. If good cause exists, the Requesting Party may ask the Producing Party to manually undertake the foregoing for certain documents identified by Bates number by the Requesting Party to the extent the document was originally produced with concealed information. The Producing Party shall not unreasonably deny such a request.

6. **Request for Native Files.** Other than as specifically set forth above, a Producing Party need not produce documents in Native

Format. If good cause exists for the Requesting party to request production of certain documents in Native Format, the Requesting Party may request production in Native Format by providing (1) a list of the Bates numbers of documents it requests to be produced in Native Format; and (2) an explanation of the need for reviewing such documents in Native Format. The Producing Party shall not unreasonably deny such requests. The Producing Party shall produce an overlay to ensure that the “NativeLink” entry in the data load file indicates the relative file path to each Native File in such production, and all Extracted Text and applicable metadata fields.

h. **Track Changes and Comments.** To the extent that a Document or ESI contains tracked changes or comments, the Document or ESI should be imaged showing tracked changes and comments.

i. **Password Protected Files.** The Parties will make reasonable efforts to ensure that all encrypted or password-protected Documents and ESI are successfully processed for review and production. To the extent encrypted or password-protected Documents are successfully processed, the Parties have no duty to identify further the prior encrypted status of such Documents. To the extent security protection for such Documents and ESI cannot be successfully processed despite reasonable efforts, the Producing Party shall notify the Requesting Party about such documents prior to production and the Parties shall meet and confer in good faith regarding reasonable efforts or mechanisms to remove such encryption or password protection with respect to the production of available Metadata.

j. **Embedded Documents.** Embedded files in responsive documents shall be extracted during processing and produced as separate documents. The Bates number of the source file from which the embedded file is extracted shall be provided as metadata associated with the embedded file, as described in Appendix A.

k. **Data Load Files.** Documents should be provided with an Opticon Cross-Reference File and Concordance data load file using standard Concordance delimiters:

1. Text Delimiter AKA “Quote” – “þ”, Hex (FE), Unicode (U+00FE), Decimal (254) 2;
2. Field Separator AKA “Comma” – “”, Hex (14);
3. Unicode (U+0014), Decimal (20);
4. Quote: ASCII character 254 (“þ”); and
5. New Line: ASCII character 174 (“®”).

All rows will contain the same number of delimiters and fields. The multi-value field delimiter must be consistent across all fields. For example, if the CC field contains semi-colons between Email addresses, the Tag field should also contain semi-colons. Concordance-compatible image and data load files should be provided in a “Data” folder. Parties have the option to exchange sample load files. If this exchange occurs, the Requesting Party will have 14 days to respond with Load File change requests. Nothing in this Order will limit the Parties from discussing Load File changes throughout the course of the Action.

1. **Deduplication.** A Producing Party shall globally deduplicate by exact duplicate families provided that (i) only exact (bit-by-bit) duplicates are subject to deduplication; (ii) the Producing Party identifies the additional custodians in an Additional Custodian metadata field; and (iii) an Email that includes content in the BCC or other blind copy fields shall not be treated as a duplicate of an Email that does not include content in the BCC or other blind copy field, even if all remaining content in the email is identical. Any party opting to deduplicate in a different manner from the foregoing procedure shall disclose their deduplication methodology to the Requesting Party prior to deduplication. If the Requesting Party objects to the methodology, it shall timely raise those concerns with the Producing Party. If a party opts not to deduplicate, it shall disclose such fact to the Requesting party prior to production of such non-deduplicated data.

m. **Production of Audio and Video Recordings.** If audio and/or video recordings are responsive, the Parties should meet and confer to determine a mutually agreeable format for producing the audio and/or video recording and/or, to the extent a Producing Party object to producing responsive audio and video recordings on grounds of undue burden, regarding the basis for the claim of undue burden.

n. **Production of Transcripts.** If deposition or other transcripts are responsive, the Parties should meet and confer to determine a mutually agreeable format for producing the transcripts.

o. **Custodian or Originating Source.** The custodian or originating source shall be identified in the Custodian field of the database load files. Documents found in the possession of a natural person (or on a natural person's hardware or storage media) should

be produced in such fashion as to identify the natural person. Documents found in the possession of a department, group, entity, or other common facility (*e.g.*, office, file room, archive, network storage, file share, back-up, hard drive, etc.) should be produced in such a fashion as to identify the department, group, entity, or facility. A Producing Party shall use a uniform description of a particular custodian across productions.

p. **Color.** Except for PowerPoint or other presentation applications, Documents containing color need not be produced in color in the first instance. However, if good cause exists for the Requesting Party to request production of certain documents in color, the Requesting Party may request production of such documents in color by providing (1) a list of the Bates numbers of documents it requests to be produced in color format; and (2) an explanation of the need for production in color format. The Producing Party shall not unreasonably deny such requests.

q. **Foreign Language.** Foreign language text files and Metadata should be delivered with the correct encoding to enable the preservation of the document's original language.

r. **Date Format.**

1. Dates and times must be concatenated into a single field, with a format of MM/dd/YYYY HH:MM:ss (zzz).
2. If a time is not available, such as the estimate date for a coded document, then 12:00 am, or 00:00 should be assigned, *i.e.*, 12/21/1999 00:00.

3. Date delimiters, such as slashes and colons, must be consistent across all fields. In the format of MM/dd/YYYY, there are no spaces and only forward slashes.
4. Date formats must be consistent within any one field.
5. Date formats must be consistent across all fields, *i.e.*, a record with a sent date should have the same format in the last modified date field.

To the extent reasonably practicable, all ESI shall be processed within a uniform time zone: *i.e.*, Greenwich Mean Time “GMT,” Eastern Standard Time “EST.” To the extent a Producing Party cannot process ESI with that time zone, it shall disclose the same and the Parties shall meet and confer regarding a reasonable alternative.

s. **Production Media.** The preferred means of producing documents is via secure FTP or secure file share. However, documents may also be produced via CD, DVD, flash drive, or hard drive. To the extent possible, physical media should be protected before it is produced.

t. **Naming Convention for Production Media.** Whether produced via secure FTP, file share, or physical media, the files produced should be combined into a compressed file such as .zip, .rar, etc. The compressed file should be named so as to indicate Producing Party, the date of the production, and the sequence of the production (*e.g.*, “FX Production 20150508-001”). If the production is made using physical media, the media should be labeled to include (a) text referencing that it was produced in *In re Foreign Exchange Benchmark Rates Antitrust Litigation*; and (b) the Bates number range of the materials contained on the media.

u. **Replacement Productions.** Any replacement production will be transmitted with a cover letter or email to identify the production as a replacement and cross-reference the BegBates and EndBates of the documents being replaced. If the replacement production is being transmitted by physical media, the media shall include the phrase “Replacement Production.”

v. **Encrypted Data.** To the extent a production is encrypted before it is produced, the Producing Party shall contemporaneously transmit the credentials necessary to decrypt the data.

VIII. ASSERTIONS OF PRIVILEGE

a. In the interest of the Parties’ time, and to minimize litigation costs, the Parties agree that categorical logging will be premitted for the following types of documents: (1) documents withheld or redacted for foreign data protection or privacy reasons; and (2) communications with bank examiners operating in their supervisory capacity, or communications discussing the substance of bank supervision issues. Documents subject to logging that do not fall within the categories identified for categorical logging will be logged as usual in accordance with federal and local rules.

b. **Categorical Privilege Logs shall be provided for certain types of documents containing the following information:**

1. a sequential number associated with each Categorical Privilege Log record;
2. the Bates number associated with the document; and
3. the category at issue.

c. For any and all documents withheld in full or in part (redacted) for foreign data protection or privacy reasons, the Producing Party shall include a list of the Categorical Log of Bates numbers identifying the documents withheld in full or in part (redacted).

d. To the extent the Requesting Party wishes to challenge the assertion of privilege or protection as to a particular document or documents identified on a categorical log, the Parties shall meet and confer with regard to identification of additional information regarding such documents to permit the Requesting Party to challenge the assertion.

e. **To the extent documents subject to logging do not fall within the categories identified for categorical logging, Privilege Logs shall be provided containing the following information:**

1. a sequential number associated with each Privilege Log record;
2. the date of the document;
3. the Bates numbers of documents redacted;
4. to the extent reasonably available, the identity of all persons who sent, authored, signed, or otherwise prepared the document, and identification of which of them are attorneys;
5. to the extent reasonably available, the identity of all persons designated as addressees or copyees along with other information about them necessary for the Requesting Party to assess the privilege (*e.g.*, title, department, job function, etc.) and identification of which of them are attorneys;

6. the title or subject of a document to the extent the title does not reveal privileged or work-product protected information;
7. a description of the contents of the document that, without revealing information itself privileged or protected, is sufficient to understand the subject matter of the document and the basis of the claim of privilege or immunity;
8. the type or nature of the privilege asserted (*i.e.*, attorney-client privilege; work product doctrine).

Privilege Log #/ Bates #	Date	Author	From or Sender	Recipient	CC	BCC	Title	Subject	Privilege Log Description	Privilege
I, iii	ii	iv	iv	V	v	v	vi	vi	vii	vii

f. **Logging of Document Families.** Where multiple members of a document “family” (*e.g.*, an email attaching a memorandum or other document, etc.) are withheld or redacted on the grounds of privilege, immunity or any similar claim, these families may be jointly logged as a single entry on the privilege log with an indication in the description field that describes the family relationship, provided, however, that information logged must be sufficient to assess the privilege for each family member. By way of example, for an email with an attached memorandum, the log entry must provide all of the information outlined in §VI.a *above* for both the email and memorandum, distinguishing the to, from, cc, bcc, dates, description, and privilege asserted for each document in the single entry. For document families in which fewer than all of the documents are withheld or redacted as

privileged or protected, the privilege log entry for the withheld document(s) shall identify the Bates number of the produced family member.

g. The following documents presumptively need not be included on a privilege log:

1. communications exclusively between a Party and its outside counsel regarding this Action;
2. work product created by outside counsel, or by an agent of outside counsel other than a Party, regarding this Action and created after commencement of this Action;
3. documents not responsive to the Requesting Party's substantive document requests (as modified by the Producing Party's responses and objections to such requests) need not be logged, notwithstanding that such documents may have been within scope of regulatory productions that are being re-produced here.

IX. INADVERTENT DISCLOSURE OF ATTORNEY-CLIENT PRIVILEGED OR WORK-PRODUCT PROTECTED INFORMATION

a. **Clawback Procedures.** Pursuant to Federal Rule of Evidence 502(d), if, in connection with the Action, information subject to a claim of attorney-client privilege or attorney work-product protection is inadvertently disclosed ("Inadvertently Disclosed Protected Information"), the disclosure of the Inadvertently Disclosed Protected Information is not a waiver or forfeiture of any claim of privilege or work product protection that a Party would otherwise be entitled to assert with respect to the Inadvertently Disclosed Protected Information and its subject matter. Any claim regarding Inadvertently Disclosed Protected Information shall be subject to the terms of the

Stipulation and Order of Confidentiality agreed upon by the Parties, and entered by the Court (ECF No. 555).

b. **Recall During Depositions.** If the recall of Inadvertently Disclosed Protected Information is made orally during the taking of a deposition or shortly before a deposition, defending counsel shall, within five business days of the deposition, submit a Notice of Recall, and the Parties shall follow the process outlined in the Stipulation and Order of Confidentiality. If the Parties agree, or the Court determines, the Inadvertently Disclosed Protected Information is not subject to a valid claim of privilege or work product protection, the Parties may submit to the Court any dispute regarding the appropriate remedy, including whether and to what extent a reopening of the deposition may be necessary.

c. **Limitations and Non-Waiver.**

1. Nothing in this Order limits the right of any Party to petition the Court for an *in camera* review of the Inadvertently Disclosed Protected Information.

2. Nothing in this Order limits the right of any Party to petition the Court for an Order finding that disclosure was not inadvertent or that the holder of the privileged or protected information failed to take reasonable steps to prevent disclosure.

XI. COST ALLOCATION

Pursuant to Federal Rule of Civil Procedure 26, the Parties generally presume that the Producing Party bears all costs of preservation, retrieval, and production of its reasonably accessible ESI and there may be cost-sharing or cost-shifting, upon agreement

of the Producing and Requesting Parties or upon proper motion and Order of the Court, as to ESI that is not reasonably accessible.

XII. THIRD PARTY DOCUMENTS

A Party that issues a non-Party subpoena (“Issuing Party”) shall include a copy of this Protocol with the subpoena and state that the Parties to the Action have requested that third Parties produce Documents in accordance with the specifications set forth herein. The Issuing Party shall timely notify other Parties when it receives non-party productions, and shall, upon request by other Parties (“Requesting Parties” for purposes of this paragraph), provide copies of such productions to Requesting Parties in the format in which they were received from the third-party. In the event that the format of a third-party production does not conform with the specifications set forth herein, the Parties shall meet and confer regarding the format of production to Requesting Parties. Nothing in this Protocol is intended to or should be interpreted as narrowing, expanding, or otherwise affecting the rights of the Parties or third Parties to object to a subpoena.

XIII. AUTHENTICATION

The Parties will meet and confer regarding an authentication stipulation concerning Documents produced in this Action.

APPENDIX A: REQUIRED METADATA FIELDS

Field	Description	Email	Non- Email ESI	Hard Copy
Bates Number Begin	Beginning page Bates number	x	x	x
Bates Number End	Ending page Bates number	x	x	x
Attachment Begin	Beginning page of attachment range	x	x	x
Attachment End	Ending page of attachment range	x	x	x
Attachment Count	Number of attachments to an email	x	x	
AllCustodian	Production custodians or non-human production data sources associated with the produced document	x	x	x
File Name	File name of document		x	
File Extension	File extension of document		x	
Email Outlook Type	Type of Outlook item, e.g. email, calendar item, note, task	x		
Page Count	For documents produced in TIFF form, number of pages in the document. For documents produced in native, page count will be 1 (for placeholder).	x	x	x
Email Subject	Subject of email	x	x	
Author	Document author		x	
From	Email author	x	x	
To	Email recipients	x	x	

Field	Description	Email	Non- Email ESI	Hard Copy
CC	Email copyees	x	x	
BCC	Email blind copyees	x	x	
Importance	Email importance flag	x	x	
Date Sent	Date sent (mm/dd/yyyy hh:mm:ss format)	x	x	
Time Sent	Time sent (mm/dd/yyyy hh:mm:ss format)	x	x	
Date Received	Date received (mm/dd/yyyy hh:mm:ss format)	x	x	
Time Received	Time received (mm/dd/yyyy hh:mm:ss format)	x	x	
Date Created	Date created		x	
DateLastModified	Last modification date (mm/dd/yyyy hh:mm:ss format)		x	
Hash Value (MD5 or SHA-1)	Unique electronic signature of email or electronic file	x	x	
Email Thread Family ID (if email threading is used by Producing Party)	Unique identifier from email threading algorithm to denote emails from a single thread and all attachments	x	x	
Production Volume	Production volume name	x	x	x
Confidentiality	Confidentiality designation pursuant to the Protective Order	x	x	x
Redacted	Descriptor for documents that have been redacted (<yes> or <no>)	x	x	x

DATED: January 13, 2017

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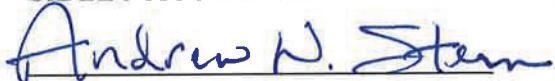
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SO ORDERED.

Dated:

January 17, 2017
New York, New York

HON. LORNA G. SCHOFIELD
United States District Judge